



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,286	03/18/2004	Manoj Kumar Singhal	15473US01	5666
<div>7590 11/13/2009</div> <div>CHRISTOPHER C WINSLADE</div> <div>MCANDREWS HELF &amp; MALLOY</div> <div>500 WEST MADISON STREET</div> <div>34TH FLOOR</div> <div>CHICAGO, IL 60661</div>				
<div>EXAMINER</div> <div>MONIKANG, GEORGE C</div>				
<div>ART UNIT</div> <div>PAPER NUMBER</div> <div>2614</div>				
<div>MAIL DATE</div> <div>DELIVERY MODE</div> <div>11/13/2009</div> <div>PAPER</div>				

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/803,286

**Applicant(s)**

SINGHAL ET AL.

**Examiner**

GEORGE C. MONIKANG

**Art Unit**

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boillot et al, US Patent 20040267540 A1, in view of Hala et al, US Patent 6507804 B1.

Re Claim 1, Boillot et al discloses a method for slowing down an encoded original audio signal (para 0033), said original audio signal having an original frequency and original playback speed (para 0033: previous pitch & speed before it is adjusted), said method comprising: receiving the encoded original audio signal (para 0047, claim 3: audio samples consisting of frames are sent through a vocoder); retrieving frames of the original audio signal (para 0085: oldwin comprises frames of the original audio sample); generating replicated frames for playback at a desired rate (para 0033: playback device such as digital message service or tape recorder, replicates the audio frames and plays them back at a desire slower rate), wherein said replicated frames comprise the frames of the original audio signal, wherein at least some of the frames of the original audio signal are repeated (para 0085: oldwin comprises frames of the original audio sample is merged with newin which comprises frames of the newly duplicated audio sample), applying a window function to the replicated frames (para 0085: oldwin comprises frames of the original audio sample is merged using SOLA with newin which comprises

frames of the newly duplicated audio sample; this merging is to smooth out/windowing the playback to avoid distortions which is what the window function does); converting the signal with the windowed replicated frames from digital to analog format with a digital to analog converter (para 0070: the signal is converted to an analog signal before it is played back through the speakers); and using the original frequency to playback the analog format signal (para 0033: playback speed is adjusted without changing the pitch/frequency); but fails to disclose inverse windowing the encoded audio signal. However, Hala et al discloses applying an inverse windowing function to an audio waveform. It would have been obvious modify the Boillot et al reference with an inverse window (Hala et al. col. 17, lines 33-54: inverse window) after the window function (Hala et al. col. 17, lines 33-54) for the purpose of reducing inconsistencies in the windowed audio frames by forcing out errors in the end of the audio signal.

Re Claim 2, the combined teachings of Boillot et al and Hala et al disclose the method according to claim 1 wherein the encoded original audio signal is encoded in the frequency domain using one of a plurality of encoding schemes (Boillot et al. para 0047, claim 3: audio samples consisting of frames are sent through a vocoder where audio frames are encoded then decoded using one of any encoding/decoding schemes), the method further comprising frequency-domain decoding of the encoded original audio signal (Boillot et al. para 0047, claim 3: audio samples consisting of frames are sent through a vocoder where audio frames are encoded then decoded using one of any encoding/decoding schemes).

Re Claim 3, the combined teachings of Boillot et al and Hala et al disclose the method according to claim 2, wherein said decoding comprises: decoding said encoded signal using a decoding scheme corresponding to said one of a plurality of encoding schemes (*Boillot et al, para 0047, claim 3: audio samples consisting of frames are sent through a vocoder where audio frames are encoded then decoded using one of any encoding/decoding schemes*); applying an inverse transform to an audio signal; and applying an inverse window function (*Hala et al, col. 17, lines 33-54*).

Re Claim 4, the combined teachings of Boillot et al and Hala et al disclose the method according to claim 1 wherein the desired playback speed is a predefined default value (*Boillot et al, para 0037: user's preferred speaker rate is predefined and stored*).

Re Claim 5, the combined teachings of Boillot et al and Hala et al disclose the method according to claim 1 wherein the desired playback speed is a programmable value (*Boillot et al, para 0037: the predefined parameter can be set by a user*).

Claim 6 has been analyzed and rejected according to claim 1.

Claim 7 has been analyzed and rejected according to claim 2.

Claim 8 has been analyzed and rejected according to claim 3.

Claim 9 has been analyzed and rejected according to claim 4.

Claim 10 has been analyzed and rejected according to claim 5.

Claim 11 has been analyzed and rejected according to claim 1.

Claim 12 has been analyzed and rejected according to claim 2.

Claim 13 has been analyzed and rejected according to claim 3.

Claim 14 has been analyzed and rejected according to claim 4.

Claim 15 has been analyzed and rejected according to claim 5.

**Contact**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GEORGE C. MONIKANG whose telephone number is (571)270-1190. The examiner can normally be reached on M-F, alt Fri. Off 7:30am-5:00pm (est).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George C Monikang/  
Examiner, Art Unit 2614

11/5/2009

**/Vivian Chin/**  
**Supervisory Patent Examiner, Art Unit 2614**